

REMARKS

This application is amended in a manner to place it in condition for allowance.

Claims 1-13 have been canceled.

Claims 14-23 are new, and are directed to similar subject matter as recited in claims 1, 3-10 and 13, respectively.

The Official Action rejected claims 11-13 under 35 USC §101 for being directed to non-statutory subject matter.

New claim 23, which directed to similar subject matter as claim 13, recites proper statutory subject matter as suggested in the Official Action, e.g., a method of treatment.

Claim 10 was rejected under 35 USC §112, first paragraph for not complying with either the written description requirement or the enablement requirement. This rejection is respectfully traversed.

New claim 21 is directed to similar subject matter as claim 10. However, the phrase "for the treatment of disorders in which the use of a bradykinin antagonist is needed" is not included.

The biological tests reported in the present specification, e.g., at pages 54 and 55, demonstrate the effectiveness of the B2 receptor antagonists in inhibiting BK-induced bronchospasm in guinea pigs. Indeed, as evidence by the scientific literature provided in the Appendix of the present amendment (four documents), the effectiveness of bradykinin

antagonists, in particular the drug Icatibant, is demonstrated in the treatment of respiratory and inflammatory diseases.

Thus, one of ordinary skill in the art, based on the common general knowledge about bradykinin antagonists as demonstrated by the literature included in the Appendix and on the biological activity of the claimed compounds as reported in the present application, including their binding to the human B2 receptor, would have expected such compounds to be used in a method of treatment of respiratory and inflammatory diseases, particularly allergic rhinitis, obstructive pulmonary disease, inflammation, asthma and chronic bronchitis, e.g., as recited in claim 22.

Therefore, new claim 21 complies with both the written description and enablement requirements.

Claims 1-13 were rejected under 35 USC §102 (b) as being anticipated by DODEY US 5,968,951 ("DODEY"). This rejection is respectfully traversed.

New independent claim 14 includes the features of both claim 1 and 2, which is a clear distinction between the claimed invention and DODEY.

The structure of that of the claimed compounds is that of a quinolin-8-yloxyethylphenyl ring linked to a nitrogen-bearing (hetero)cyclic aliphatic group ("B") by means of a sulfonamide linker containing an α,α -disubstituted amino acid. This structure, in particular the aliphatic heterocycle

containing one or more nitrogen atoms directly attached to the carbonyl (group "B" in formula (I)) cannot be found in any of the compounds disclosed by DODEY. Thus, DODEY fails to anticipate the claimed invention.

DODEY also fails to render obvious the claimed invention.

The claimed compounds show an increased activity as compared to those in DODEY.

Tested for their binding activity to the human B2 receptor cloned and transfected in a stable manner into CHO cells, the benzensulfonamide derivatives according to DODEY are said to inhibit the binding of bradykinin to the B2 receptor by at least 95% at a concentration of 10 μ M. See, e.g., the paragraph bridging columns 18 and 19 of DODEY. (Note that the concentration is erroneously indicated as "10 μ W", but the EP equivalent EP 773932 correctly indicated "10 μ M".)

Tested under equivalent experimental conditions (eukaryotic cells transfected with the human B2 receptor), the presently claimed compounds exhibit a binding affinity (pKi) of 9 or more. See, e.g., page 55 of the present specification. This binding affinity implies that the maximum effect, i.e., a theoretical inhibition of the receptor binding by nearly 100%, is achieved with a concentration of test compound of around 10^{-8} M. Compared with the value reported in DODEY (10μ M, or 10^{-5} M), this concentration is about 1000 times lower, which means the claimed

compounds have some 1000-fold higher B2-binding potency than the compounds of DODEY.

Thus, based on the technical information respectively available from DODEY and from the present application, the skilled person would immediately realize that the claimed and disclosed compounds are more effective in B2 receptor-binding than any compound disclosed by DODEY, including the compound with the closest structure, i.e., Table I-No. 19.

Therefore, claims 14-23 cannot be anticipated by DODEY, and claims 14-23 cannot be rendered obvious by DODY.

Claims 1-13 were provisionally rejected on the ground of nonstatutory double patenting over claims 1-18 of copending Application No. 11/786041. This rejection is respectfully traversed.

Claims 14-23 correspond to claims 1, 3-10, and 13, respectively. As the present application was filed prior to the co-pending application 11/786041. According to MPEP 804 I B1, if a "provisional" nonstatutory obviousness-type double patenting (ODP) rejection is the only rejection remaining in the earlier filed of the two pending applications, while the later-filed application is rejectable on other grounds, the examiner should withdraw that rejection and permit the earlier-filed application to issue as a patent without a terminal disclaimer. If the ODP rejection is the only rejection remaining in the later-filed application, while the earlier-filed application is rejectable on

other grounds, a terminal disclaimer must be required in the later-filed application before the rejection can be withdrawn.

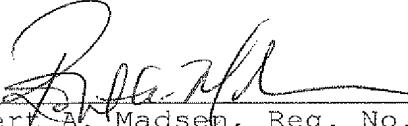
Thus, the double patenting rejection should be withdrawn, as the present application is the earlier filed pending application.

In view of the amendment to the claims and the foregoing remarks, the present application is in condition for allowance at the time of the next Official Action. Allowance and passage to issue on that basis is respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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APPENDIX:

The Appendix includes the following item(s):

- Osteoarthritis and Cartilage 12, S137 Abs P332 (2004).
- Turner et al., "Role of kinins in seasonal allergic rhinitis: Icatibant, a bradykinin B₂ receptor antagonist, abolishes the hyperresponsiveness and nasal eosinophilia induced by antigen", Journal of Allergy and Clinical Immunology, January 2001, pp. 105-113.
- Akbary et al., "Efficacy and tolerability of Icatibant (Hoe 140) in patients with moderately severe chronic bronchial asthma", Immunopharmacology 33 (1996) pp. 238-242.
- Austin et al. , "Reduction by Hoe 140, the B₂ kinin receptor antagonist, of antigen-induced nasal blockage", British Journal of Pharmacology, (1994), 111, pp. 969-971.